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CLAIMS

1. (Cancelled)

2. (Previously Presented) The electrode as in claim 44, comprising about 5 to about 15 wt. % of the support, about 85 to about 90 wt. % of the catalyst, and up to about 15 wt. % of the proton conductive material.

3. (Original) The electrode as in claim 2, comprising about 5 to about 10 wt. % of the support, about 85 to about 90 wt. % of the catalyst, and about 5 to about 10 wt. % of the proton conductive material.

4. (Cancelled)

5. (Previously Presented) The electrode as in claim 44, comprising about 20 to about 80 wt. % of the support, about 20 to about 80 wt. % of the catalyst, about 5 to about 25 wt. % of the proton conductive material.

6. (Previously Presented) The electrode as in claim 44, wherein the proton conductive material is selected from the group consisting of proton conducting ionomers and ion exchange resins.

7. (Original) The electrode as in claim 6, wherein the proton conducting ionomer comprises a complex of an alkali metal, an earth metal salt, or a protonic acid, and one or more polar polymers selected from the group consisting of polycether, polycsters, and polyimides.

8. (Original) The electrode as in claim 6, wherein the proton conducting ionomer comprises a complex of an alkali metal, an alkaline earth metal salt or a protonic acid and a network or crosslinked polar polymers selected from the group consisting of polyethers, polyesters and polyimides.

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9. (Original) The electrode as in claim 6, wherein the ion exchange resin comprises a sulfonated hydrocarbon ion exchange resin or a sulfonated fluorocarbon ion exchange resin.

10. (Previously Presented) The electrode as in claim 44, wherein the support material is non-oxidizable at anodic potentials less than about 3 V.

11-15. (Cancelled)

16. (Previously Presented) The electrode as in claim 44, wherein the support material has a resistivity of less than about 270 microohm-centimeter.

17. (Previously Presented) The electrode as in claim 44, wherein the support material has a surface area of greater than about 25 meters²/gram.

18. (Previously Presented) The electrode as in claim 44, wherein the catalyst material is selected from the group consisting of platinum, palladium, rhodium, carbon, gold, tantalum, tungsten, ruthenium, iridium, osmium, mixtures comprising at least one of the foregoing catalyst materials, and alloys comprising at least one of the foregoing catalyst materials.

19. (Cancelled)

20. (Previously Presented) The electrode as in claim 44, wherein the support material is in a particulate form.

21-43. (Cancelled)

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44. (Previously Presented) An electrode for use in an electrochemical cell system, comprising, based on the total weight of the electrode:

about 5 to about 95 wt. % of a support that is non-oxidizable at anodic potentials of greater than about 1.5 to less than about 4 volts, wherein the support material comprises diamond;

about 5 to about 95 wt. % of a catalyst integrated with the support; and

up to about 50 wt. % of a proton conductive material integrated with the catalyst.